

Attorney Docket No. P10334-US1
Customer Number 27045

REMARKS/ARGUMENTS

1.) Claim Amendments

Claims 1-5, 7-14, 16-19, and 21-23 are pending in the application. Claims 6, 15, 20, and 24-26 were previously canceled. The pending claims have not been amended, but a courtesy copy of the claims is provided above.

2.) Claim Rejections – 35 U.S.C. § 103(a)

The Examiner rejected claims 1-3, 8-14 and 7-19 under 35 U.S.C. § 103(a) as being unpatentable over Adoul in view of Ubale, and further in view of Deller, et al. (1987, Discrete-Time Processing of Speech Signals). The Examiner also rejected claims 2-3, 7-11, 13-14, 16-18 and 21-23 under 35 U.S.C. § 103(a) as being unpatentable over Adoul, et al. (US 5,754,976) in view of Ubale, et al. (US 5,778,335).

As provided in MPEP § 2143, "[t]o establish a prima facie case of obviousness, ... the prior art reference (or references when combined) must teach or suggest all the claim limitations." Furthermore, under MPEP § 2142, "[i]f the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness." It is respectfully submitted that the Office Action does not factually support a prima facie case of obviousness for claim 1 based on Adoul in light of Ubale and Deller because all elements of claim 1 are not taught.

Claim 1:

Claim 1 states:

A multi-codebook fixed bitrate CELP signal block encoding/decoding method, including the steps of:

selecting, for each signal block, a corresponding excitation codebook identification from a pre-determined, signal block independent sequence of codebook identifications; and

encoding/decoding each signal block by using an excitation codebook having said selected excitation codebook identification;

wherein said pre-determined signal block independent sequence of codebook identifications is defined by cyclically stepping through each excitation codebook identification.

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The Applicant respectfully maintains that neither Adoul nor Ubale teach the steps of "selecting, for each signal block, a corresponding excitation codebook identification from a pre-determined, signal block independent sequence of codebook identifications" wherein said pre-determined signal block independent sequence of codebook identifications is defined by cyclically stepping through each excitation codebook identification. On the other hand, the Examiner maintains "Adoul teaches that the search complexity is drastically reduced by restraining the subset of code vectors of which a certain number of non-zero amplitude pulses meet a pre-determined criteria which reads on 'selecting, for each signal block, a corresponding excitation codebook identification from a pre-determined, signal block independent sequence of codebook identifications' since the system is capable of selecting the subset a priori (col. 2, lines 22-23)."

The Applicant respectfully disagrees with the significance of the Examiner's cited reference. The claim element in question refers to the selection of the codebook. The cited reference, on the other hand, refers to the selection of the vector within a codebook. Consequently, the cited reference does not read on the claim element.

The Examiner admits that Adoul does not teach all of the elements of claim 1. However, the Examiner believes that Ubale teaches implementation of multiple excitation codebooks. The Applicant respectfully disagrees with the significance of the Ubale reference.

Ubale teaches the use of various signal dependent measures to select the final appropriate excitation codebook. Note that the codebook setup/configuration is always performed in a signal dependent manner (e.g., in the signal dependent voice/music classifier) (col. 4 lines 32-34; col. 5, lines 43-63; col. 6 lines 35-37; fig. 1). Assuming *arguendo* that the claim elements could somehow be found in Adoul and Ubale, the combination of Adoul and Ubale teaches a signal dependent codebook selection process. Thus, the combination teaches against the signal independent codebook selection process of claim 1.

The combination of Adoul and Ubale still do not teach all of the elements of claim 1. However, the Examiner uses Deller to teach claim element of "wherein said pre-determined signal block independent sequence of codebook identifications is defined by

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cyclically stepping through each excitation codebook identification." The Applicant respectfully disagrees with the Examiner's characterization of Deller.

The cited passage from Deller states:

By performing an exhaustive search through the codebook we find the excitation sequence which minimizes the error energy.

In contrast, the element of claim 1 reads: "wherein said pre-determined signal block independent sequence of codebook identifications is defined by cyclically stepping through each excitation codebook identification." In other words, this refers to the codebook selection, not the vector selection process which would be a "search through the codebook" as taught by Deller. Consequently, Deller does not teach the claim element of wherein said pre-determined signal block independent sequence of codebook identifications is defined by cyclically stepping through each excitation codebook identification.

The combination of Adoul, Ubale, and Deller do not teach all of the elements of claim 1. Furthermore, Ubale (which is relied upon the Examiner to teach multiple codebooks) teaches a codebook selection process that is signal based. So, the combination of Adoul, Ubale, and Deller teach away from the signal independent based method of claim 1.

Since it is well recognized that teaching away from the claimed invention is a *per se* demonstration of lack of *prima facie* obviousness, it is clear that the Examiner has not borne the initial burden of factually supporting any *prima facie* conclusion of obviousness. Thus, for this reason alone, the examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met, and the rejection under 35 U.S.C. ' 103 should be withdrawn.

Claim 7:

Claim 7 states:

A multi-codebook fixed bitrate CELP signal block encoding/decoding method, including the steps of:

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selecting, for each signal block, a corresponding excitation codebook identification from a pre-determined, signal block independent sequence of codebook identifications; and
encoding/decoding each signal block by using an excitation codebook having said selected excitation codebook identification;
wherein said deterministic selection procedure is defined by randomly stepping through each excitation codebook identification in said sets of excitation codebooks.

The Applicant respectfully maintains that neither Adoul nor Ubale teach the steps of "selecting, for each signal block, a corresponding excitation codebook identification from a pre-determined, signal block independent sequence of codebook identifications" wherein said pre-determined signal block independent sequence of codebook identifications is defined by cyclically stepping through each excitation codebook identification. On the other hand, the Examiner maintains "Adoul teaches that the search complexity is drastically reduced by restraining the subset of code vectors of which a certain number of non-zero amplitude pulses meet a pre-determined criteria which reads on 'selecting, for each signal block, a corresponding excitation codebook identification from a pre-determined, signal block independent sequence of codebook identifications' since the system is capable of selecting the subset a priori (col. 2, lines 22-23)."

The Applicant respectfully disagrees with the significance of the Examiner's cited reference. The claim element in question refers to the selection of the codebook. The cited reference, on the other hand, refers to the selection of the vector within a codebook. Consequently, the cited reference does not read on the claim element.

The Examiner also maintains that:

Adoul teaches a search complexity is drastically reduced by restraining the subset of code vectors being searched to code vectors of which a certain number of non-zero amplitude pulses meet a predetermined criteria, which reads on "pseudo-random stepping or selection," since predetermined criteria changes, the set of code vectors which meet the criteria will change, and thus, the selection is pseudo-random. (Office Action, dated March 21, 2005, page 3, 1st paragraph)

In contrast, the element of claim 1 reads: "wherein said deterministic selection procedure is defined by randomly stepping through each excitation codebook

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identification in said sets of excitation codebooks." In other words, this refers to the codebook selection, not the vector selection process as taught by Adoul. Adoul does not even contemplate multiple codebooks, and thus does not contemplate a codebook selection process.

Additionally, nothing in Adoul teaches a "random" selection process. The Applicant is at a loss to follow the Examiner's logic of equating predetermined criteria changes" to a random process. Nothing in Adoul even remotely teaches a random selection concept. Consequently, Adoul does not teach the claim element of wherein said deterministic selection procedure is defined by randomly stepping through each excitation codebook identification in said sets of excitation codebooks.

The Examiner admits that Adoul does not teach all of the elements of claim 7. However, the Examiner believes that Ubale teaches implementation of multiple excitation codebooks. The Applicant respectfully disagrees with the significance of the Ubale reference.

Ubale teaches the use of various signal dependent measures to select the final appropriate excitation codebook. Note that the codebook setup/configuration is always performed in a signal dependent manner (e.g., in the signal dependent voice/music classifier) (col. 4 lines 32-34; col. 5, lines 43-63; col. 6 lines 35-37; fig. 1). Assuming *arguendo* that the claim elements could somehow be found in Adoul and Ubale, the combination of Adoul and Ubale teaches a signal dependent codebook selection process. Thus, the combination teaches against the signal independent codebook selection process of claim 1.

The combination of Adoul, Ubale, and Deller do not teach all of the elements of claim 1. Furthermore, Ubale (which is relied upon the Examiner to teach multiple codebooks) teaches a codebook selection process that is signal based. So, the combination of Adoul, Ubale, and Deller teach away from the signal independent based method of claim 1.

Since it is well recognized that teaching away from the claimed invention is a *per se* demonstration of lack of *prima facie* obviousness, it is clear that the Examiner has not borne the initial burden of factually supporting any *prima facie* conclusion of obviousness. Thus, for this reason alone, the examiner's burden of factually supporting

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a *prima facie* case of obviousness has clearly not been met, and the rejection under 35 U.S.C. § 103 should be withdrawn.

Independent claims 12, 19, and 22 are patentable for the same reasons that claims 1 and 7 are patentable. The dependent claims depend from the respective independent claims and recite further limitations in combination with the novel elements of the independent claims. Therefore, the allowance of the independent claims is also respectfully requested.

The Examiner rejected claims 4-5 under 35 U.S.C. § 103(a) as being unpatentable over Adoul in view of Ubale, and further in view of Heidari, et al. (US 6,055,496). The Applicant respectfully traverses this rejection.

As discussed above, Adoul, Ubale and Deller do not disclose all the elements of claim 1. Claims 4 and 5 incorporate the elements of claim 1. Thus, it is apparent that Heidari does not make up for the deficiencies of Adoul, Ubale and Deller discussed above. Therefore, claims 4 and 5 are also patentable. The Applicant, therefore, respectfully requests that the §103 rejection for claims 4 and 5 be withdrawn.

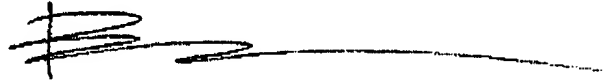
CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

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The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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